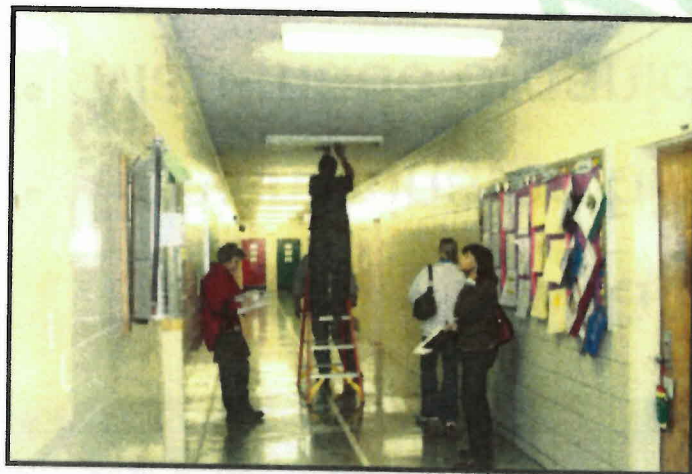
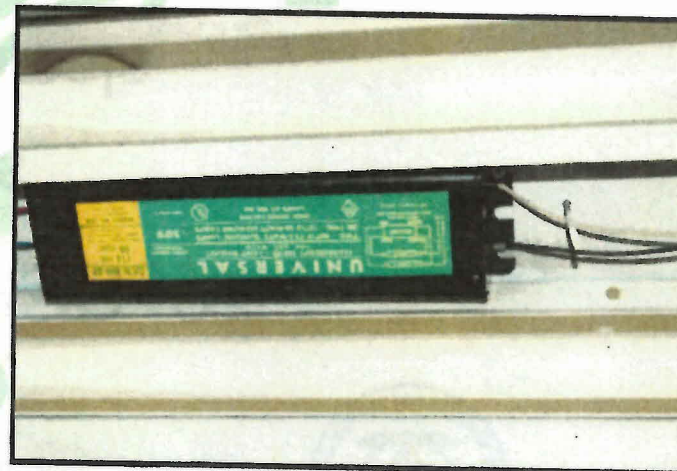


# PCBs in Lighting Fixtures in NYC Schools

Presentation by Judith Enck, EPA Regional  
Administrator, US EPA Region 2



5/24/2011

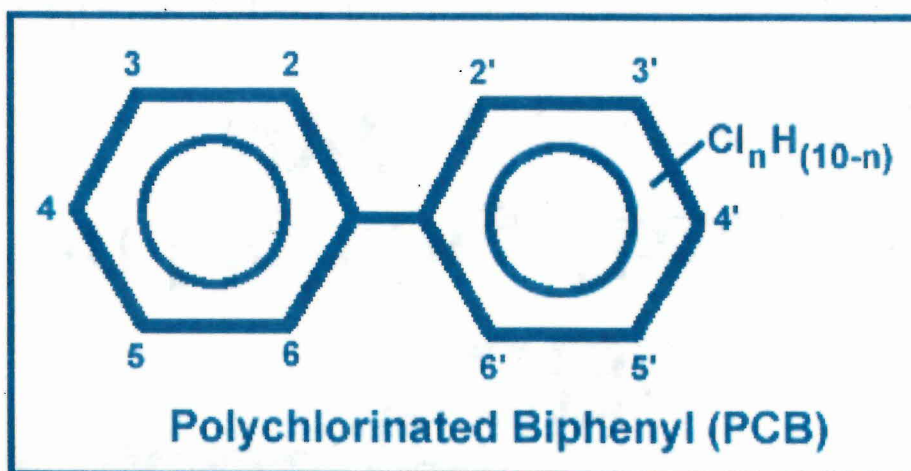


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## What are PCBs?

- Polychlorinated biphenyls
- Man-made organic chemicals
- Industrial and commercial applications





## Health Effects of PCBs

- Probable human carcinogen
- Cause cancer in animals
- Serious non-cancer effects on the immune, reproductive, nervous and endocrine systems





## EPA/NYC Pilot Project

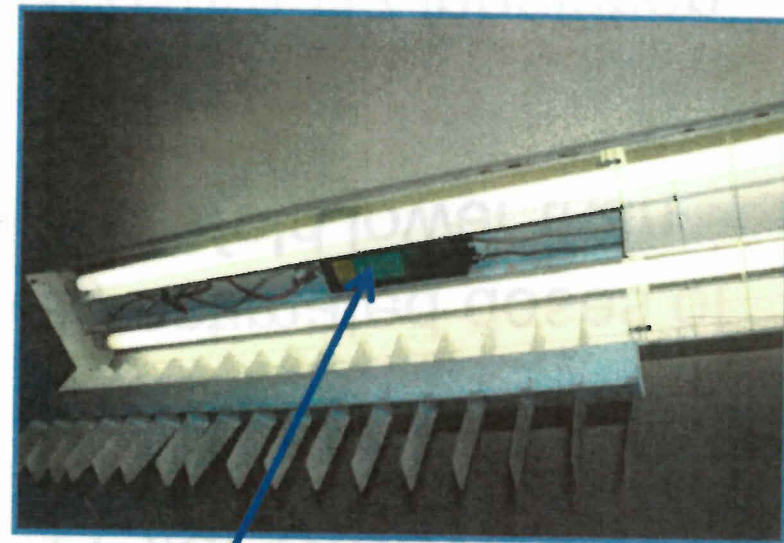


- January 2009- Evaluated PCBs in caulk
- Summer 2010- Air, dust and soil samples
- Levels above health-based benchmarks



## PCB-Containing Ballasts

Widespread leaking  
PCB-containing  
lighting ballasts



PCB-containing Ballast



## EPA Report on Pilot Study

- Post-light fixture removal, estimated doses of PCBs were approximately 3-fold lower than pre-remediation
- Predominant route of exposure via inhalation

From: Estimation of PCB Dose Distributions for Three New York City Schools Using Measurement Data and the Stochastic Human Exposure and Dose Simulation (SHEDS) Model, Final Report Prepared for USEPA Region 2, March 31, 2011



## Widespread Issue

- Nation-wide
- Schools built prior to 1979
- Evidence of leaks in Oregon, North Dakota, Massachusetts

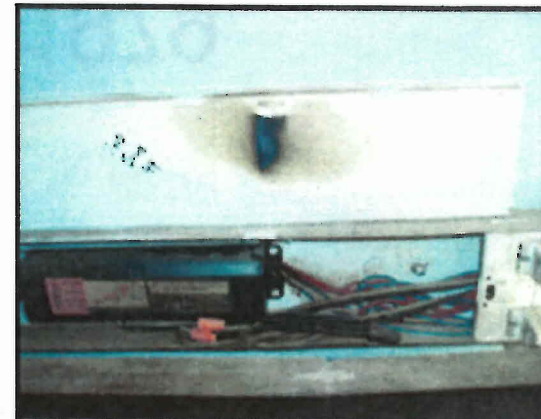




## EPA National Guidance



This ballast sparked a fire at a southern California school in 1999



An old ballast that burst unexpectedly





## PS 36 in Staten Island

- Response to teachers' sighting of leak
- Ballasts leaked onto floor
- Elevated levels



## EPA Inspections

- 113 of 145 samples above 50 ppm
- 2/3 or more of samples at each school elevated
- PS 306 in BK



# Summary of EPA Sampling Results

School	Borough	Date of Sampling Event	Number of Samples Taken	Number of Samples > 50 ppm (mg/kg)	Range of Exceedances in ppm (mg/kg)
PS 53	Staten Island	1/8/2011	33	22	51 – 260,000
PS 11	Brooklyn	1/15/2011	28	18	51 – 2,200
PS 13	Brooklyn	1/22/2011	7	7	40 - 560
PS 358					
PS 68	Bronx	1/29/2011	13	10	61 – 1,260
PS 206	Manhattan	2/5/2011	10	9	95 – 7,600
PS 37			1	1	
PS 112			3	2	
			(14 total)	(12 total)	
PS 45	Brooklyn	2/12/2011	19	19	830 – 670,000
PS 306	Brooklyn	2/19/2011	31	25	480 – 1,200,000

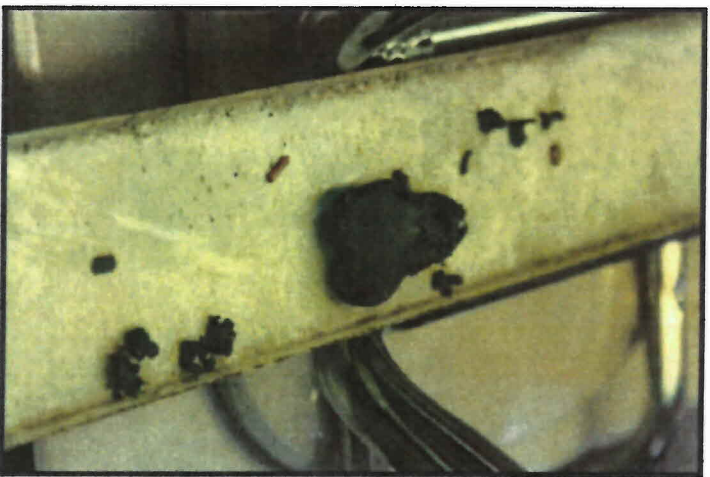
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# Tar-like Globules



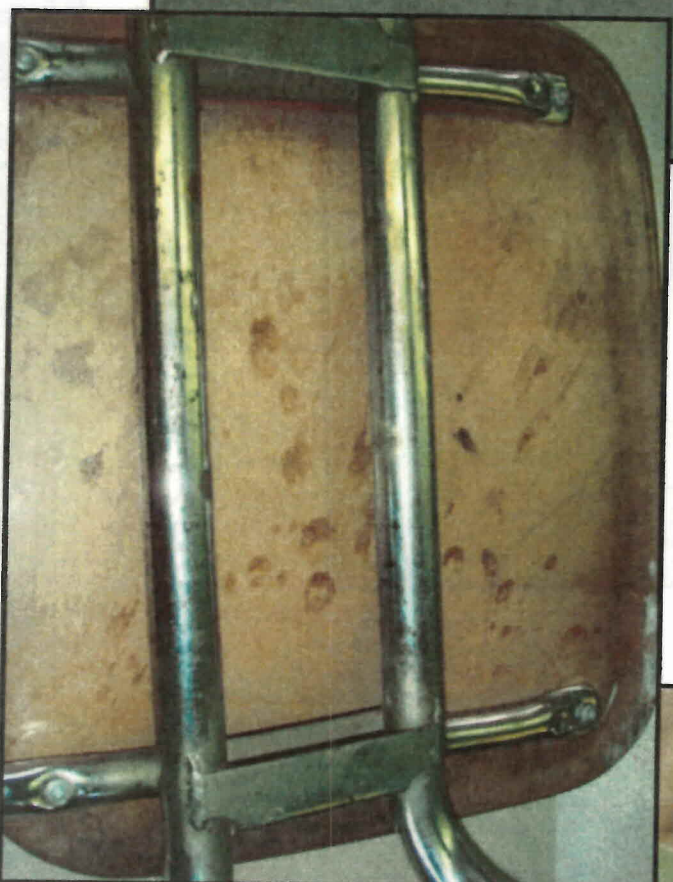
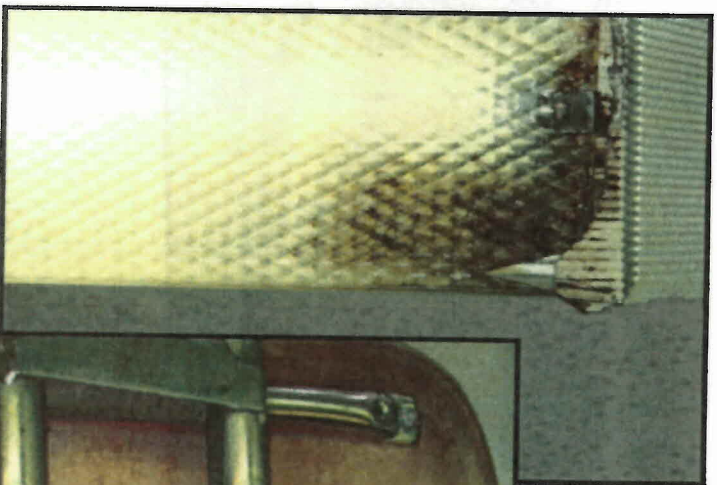
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# Oily Stains

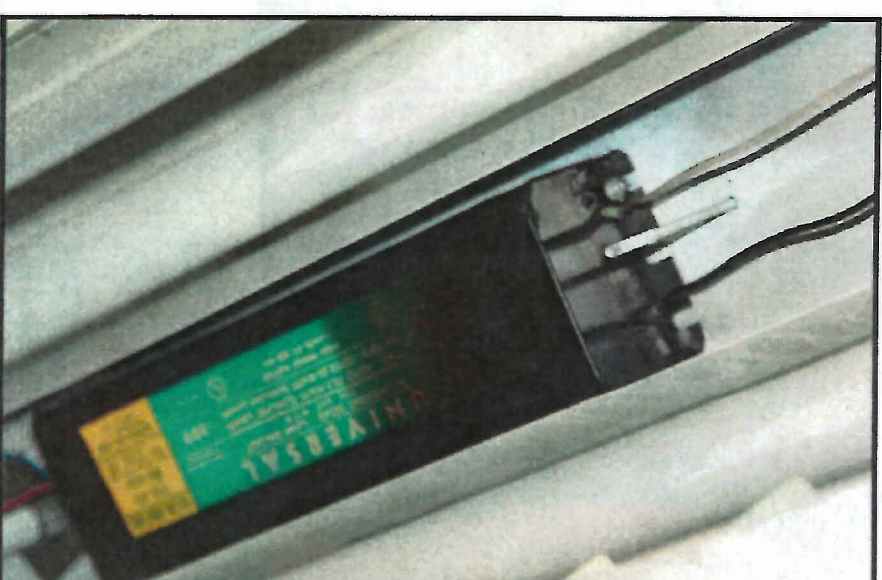
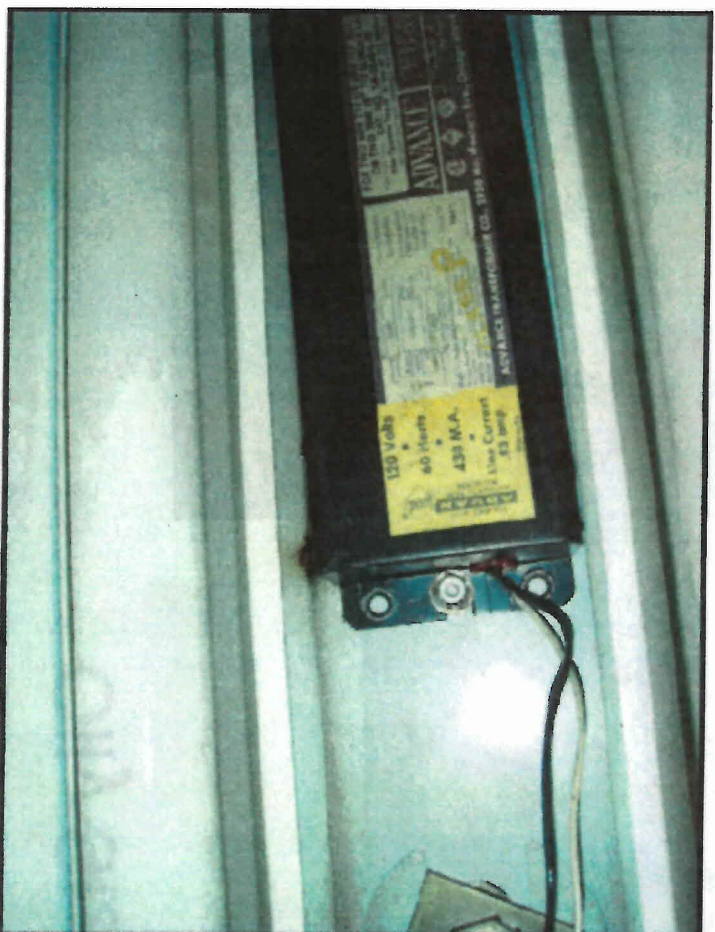


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## Burnt Ballasts



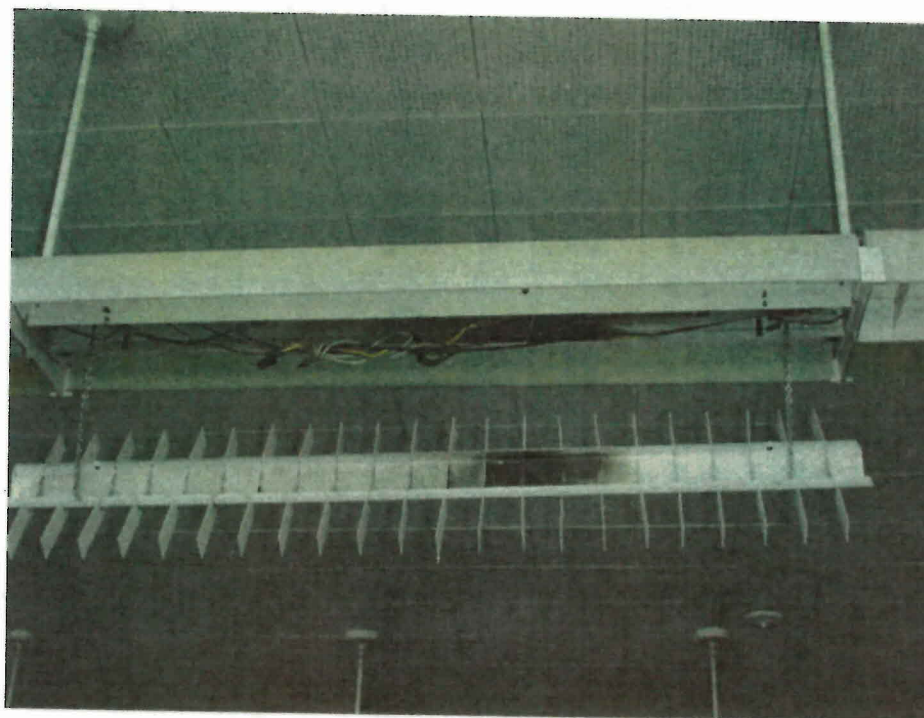
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## Ballast Location



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## NYC's Response to Leaking Ballasts

- Remove leaking ballasts
- Replace schools with leaks in 1 year
- Custodial/building staff visual inspections





## NYC's Comprehensive Plan

- 772 schools
- Comprehensive
- 10 year time frame



# EPA's Concern



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## Benefits of Lighting Replacement

- Prevent exposure
- Save energy  
(and \$)
- Create jobs





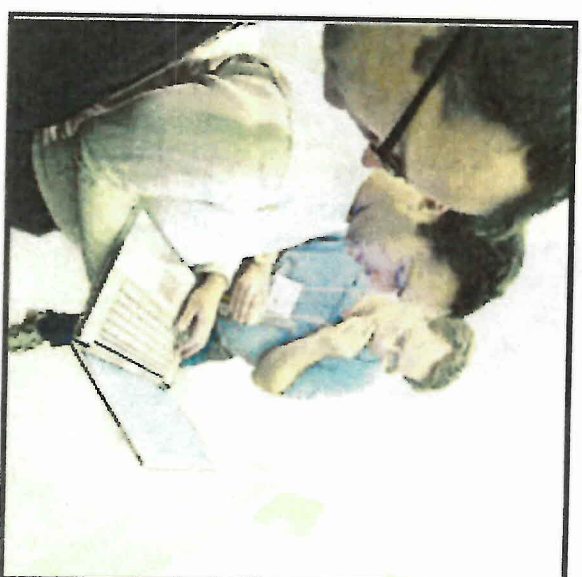
## Congressional, Elected Official and Public Interest

- Letters to EPA Region 2
- City Council Hearing
- Extensive media coverage





# EPA ORD Research



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## Looking Forward

